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3,134,596

GOLF CLUB HEAD WITH TRANSPARENT INSERT

Filed Jan. 15, 1962

FIG. 1

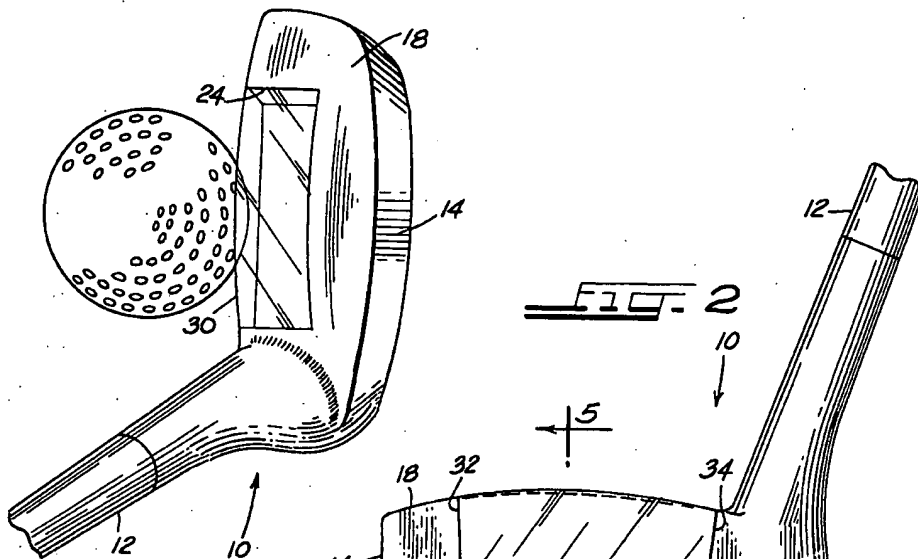


FIG. 2

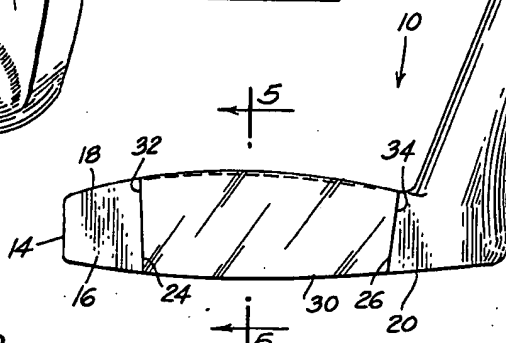


FIG. 3

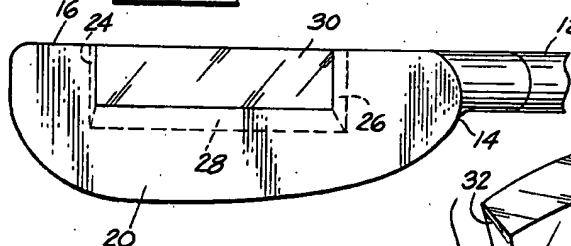


FIG. 4

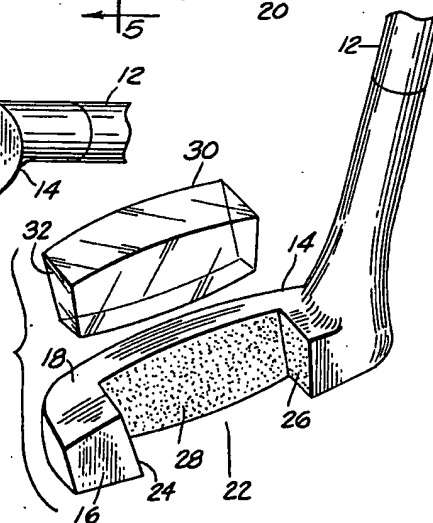
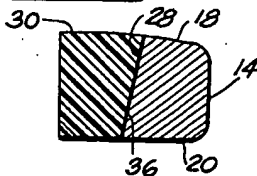


FIG. 5



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GOLF CLUB HEAD WITH TRANSPARENT INSERT
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This invention relates generally to improvements in golf clubs and more particularly to a golf club having a transparent insert in the head thereof.

There is, perhaps, no other sport comparable to golf in the number and ever changing character of factors which affect play of the game. As any golfer can attest, mastery of this game requires an extremely high degree of concentration wherein such variable factors as distance, wind velocity, texture of grass, terrain, moisture, etc., must be considered and taken into account with each and every swing of a club. More specifically, no phase of the game places greater mental demands on the player than does putting, for here, the distance factor and corresponding margin for error is reduced to a matter of inches or fractions of inches. Clearly, then, any means which aids in improving the accuracy of putting is desirable.

It is therefore an important object of this invention to provide a golf club, and more particularly a putter, having means for improving putting accuracy.

One of the most important factors in putting is the condition and character of the green. Thus, for example, the texture, grain, height and moisture condition of the grass frequently determines how a particular putt should be played. It would, of course, be desirable if the golfer could actually see and observe the grass at all times during putting. However, it is well known that when the putter is positioned directly behind the ball preparatory to putting, the golfer's eyes are focused on the impact point so that he cannot observe the grass.

It is therefore another important object of this invention to afford a golf club of the character described having means whereby the golfer may observe the ground and grass directly beneath the club. In this regard, the golf club is provided with a transparent insert extending from the bottom to the top of the head thereof.

Another object is to provide a golf club of the character described in which said transparent insert additionally comprises the driving face thereof so that the ball may be seen therethrough when the club is aligned therebehind preparatory to putting.

A further object is to afford a golf club of the character described in which said transparent insert may be removed and replaced in the event that the same becomes marred or worn. Since the face of the insert likewise comprises the driving face of the club, replacement of the insert also comprises replacement of the driving face.

Still another object is to provide a golf club of the character described which may be inexpensively fabricated and yet is most efficient for the purposes intended.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel features of construction, arrangement and a combination of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportion, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

For the purpose of facilitating an understanding of my invention, I have illustrated in the accompanying drawings a preferred embodiment thereof, from an inspection of which, when considered in connection with the following description, my invention, its mode of construc-

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tion, assembly and operation, and many of its advantages should be readily understood and appreciated.

Referring to the drawings in which the same characters of reference are employed to indicate corresponding or similar parts throughout the several figures of the drawings:

FIG. 1 is a top perspective view of a golf club head embodying the principles of the invention and showing the same in operational alignment behind a golf ball preparatory to putting;

FIG. 2 is a front elevational view thereof;

FIG. 3 is a bottom plan view thereof;

FIG. 4 is an exploded front perspective view showing the transparent insert removed therefrom; and

FIG. 5 is a sectional view taken on the plane of line 5-5 in FIG. 2 and viewed in the direction indicated.

Referring now to the various figures of the drawings, the numeral 10 indicates generally a golf club embodying the principles of the invention. The club 10 comprises a shank 12 having a head 14 connected thereto. The head 14 may be of any suitable putter head configuration, and the same is provided with the customary straight front driving face 16. The head 14 may be made of any suitable metal or the like, and the top and bottom surfaces 18 and 20 thereof may be slightly arcuate as indicated.

It is important to note that the head 14 is provided with a longitudinally extending cut-out 22 which opens to the front face 16 thereof. The cut-out 22 is defined by a pair of end walls 24 and 26 and a rear wall 28, and it should be noted that all of said walls are tapered downwardly as indicated (see FIGS. 2, 3 and 5). The cut-out walls 24, 26 and 28 thus define a larger area at the top surface 18 than at the bottom surface 20 of the head 14. It should further be noted that all three of the cut-out walls need not have the same degree of taper but may vary one from the other as shown in FIG. 3 of the drawings.

Nicely and wedgingly fitted within the cut-out 22 is a complementarily shaped insert 30. The insert 30 thus is provided with end walls 32 and 34 and a rear wall 36 of identical but opposed taper to the cut-out walls 24, 26 and 28. As indicated in FIG. 4 of the drawings, a layer of a suitable adhesive, such as an epoxy resin, may likewise be employed to insure retention of the insert 30 in the cut-out 22. The insert may be made of any clear and transparent material such as various plastics or glass, although I prefer to employ the plastic commonly known as "Lucite." In this regard, the described layer of adhesive compensates for any minute differences in expansion which may occur.

Turning now to FIG. 1 of the drawings, the advantages of the invention may be readily appreciated. The transparent insert 30 permits the golfer to observe the ball and the grass beneath the head 14 and at the point of contact of the ball and club while preparing to putt. The insert 30 defines the area of the driving head so that the actual impact with the ball may likewise be observed therethrough. I have found these novel advantages to be a definite aid in improving putting accuracy. In the event of excessive wear or marring, the insert may be readily removed and replaced, thereby prolonging the effective life of the club 10 and maintaining a more accurate driving face.

It will of course be appreciated that while the invention has been illustrated and described in connection with a putter, the same may likewise be employed in the class of golf clubs commonly known as "woods" which include "drivers," "brassies," "spoons," and the like.

It is believed that my invention, its mode of construction and assembly, and many of its advantages should be readily understood from the foregoing without further de-

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scription, and it should also be manifest that while a preferred embodiment of the invention has been shown and described for illustrative purposes, the structural details are nevertheless capable of wide variation within the purview of my invention as defined in the appended claims.

What I claim and desire to secure by Letters Patent of the United States is:

1. A golf putter comprising a metal head having a straight driving face, said head being formed with a longitudinally extending cut-out opening to said driving face and to the top and bottom of said head and defined by a downwardly tapering rear wall and a pair of downwardly tapering end walls, a layer of adhesive applied to said cut-out walls, and a transparent plastic insert wedg-
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ingly fitted in said cut-out, said insert being of complementary configuration and nicely filling said cut-out to

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afford unobstructed vision through said head and through said driving face.

2. A golf putter comprising a head having a straight driving face, said head being formed with a longitudinally extending cut-out opening to said driving face and the top and bottom of said head, said cut-out defined by a rear wall and a pair of end walls, a transparent insert fitted in said cut-out, and auxiliary means for retaining said insert in said cut-out, said insert being of complementary configuration and nicely filling said cut-out to afford unobstructed vision through said head and through said driving face.

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